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ACT-IR4002US

IrReady™ FIR USB Adapter

User's Manual



April 21, 2010

Version 1.0.0

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All Rights Reserved**

**Warning! Please Install Driver BEFORE you plug in the
Dongle to USB port, for MAC & all Windows OS;
EXCEPT Windows Vista and Windows 7, which should First
Plug the dongle beforehand.**

FCC Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING-FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user authority to operate this equipment

NOTE: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and receiver.
- Reorient or relocate the receiving antenna.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment is in the 2nd Class category (information equipment to be used in a residential area there to) and conforms to the standards set by the Voluntary Control Council For Interference by Data Processing Equipment and Electronic Office Machines aimed at preventing radio interference in such residential area.

When used near a radio or TV receiver, it may become the cause of radio interference. Read the instructions for correct handling.

NOTE: Must be used with shielded cable only.

FOR YOU RECORDS

For your assistance in reporting this product in case of loss or theft, please record below the model number and serial, which are located on the bottom of the case. Please retain this information.

Model Number	Serial Number
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Date of Purchase	Place of Purchase
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REVISION HISTORY

Revision History		
Revision	Date	Comment
1.0	04/21/2010	Initial released

ACTiSYS reserves the right to make changes without further notice to any products herein to improve reliability, function or design. ACTiSYS does not assume any liability arising out of the application or use of any product or circuit described herein.

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1 INTRODUCTION

ACT-IR4002US is an advanced wireless Fast Infrared USB adapter designed to replace the serial port or FIR controller based FIR/SIR wireless peripheral through the USB port. Taking advantage of the true plug-and-play nature and high bandwidth of USB, ACT-IR4002US offers the easiest conversion of existing wireless to the legacy-free PC platform with the following features:

- Supports Win 98SE/ME/XP (32 & 64 bit)/ Vista (32 & 64 bit)/Windows 7(32 & 64 bit), Win CE 4.2 & 5.0 (USB host), Mac 10.x (both Intel & Power PC based) and Linux.
- WHQL certified.
- Fully compliant to USB specification 1.1 and IrDA specification 1.4
- Full-speed (12 Mbps) USB device operation
- Supports FIR (4Mbps), MIR (1.152 Mbps) and all SIR speeds (9.6, 19.2, 38.4, 57.6 and 115.2 kbps).
- Bus-powered device. Obtain power from USB port. No external power supply required.
- Low power consumption in standby mode (Standby current 20 mA).
- Not occupy PC's COM or Parallel port and has no complicated hardware port and resource setting and conflict, such as IO address / IRQ / DMA numbers.
- Package size: 1.85"L x 0.7"W x 0.35"H, 2.08 oz (60 gr).

2 PACKAGING CHECK LIST

The package includes:

1. ACT-IR4002US USB Dongle
2. USB Cable
3. Installation CD for Driver and User's manual.

3 SYSTEM REQUIREMENTS

1. Windows 98SE/ME/2000/XP/Vista/**Windows 7**, Win CE 4.2 & 5.0 (USB host), Mac 10.x (both Intel & Power PC based) and Linux
2. One unoccupied USB port.

4 BIOS SETUP

Before you use this device, You MUST enable your computer USB port in BIOS Settings.

5 DRIVER INSTALLATION FOR WINDOWS XP/2000/ME/98SE

Warning! Please install driver BEFORE you plug in ACT-IR4002US to PC USB port.

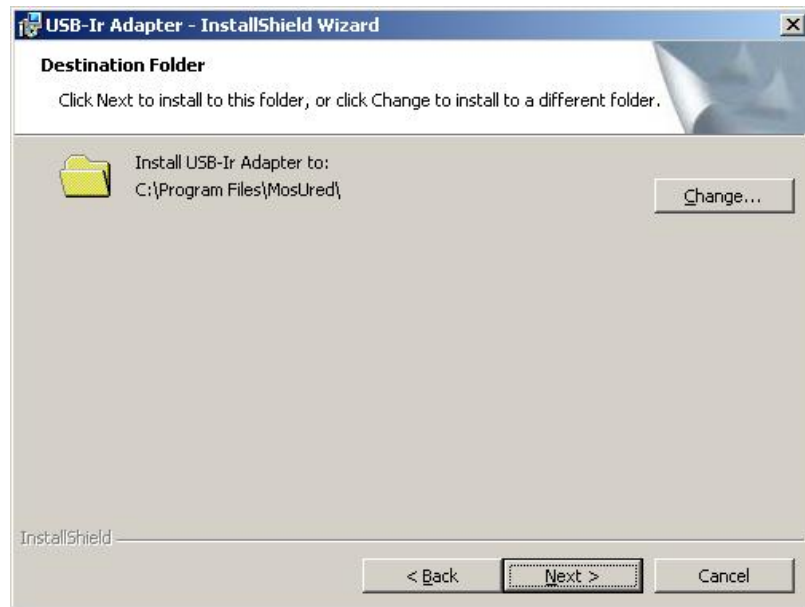
1. Insert the installation CD, Windows will auto run "**setup.exe**" file and ask you to choose setup language. Please select one to continue.



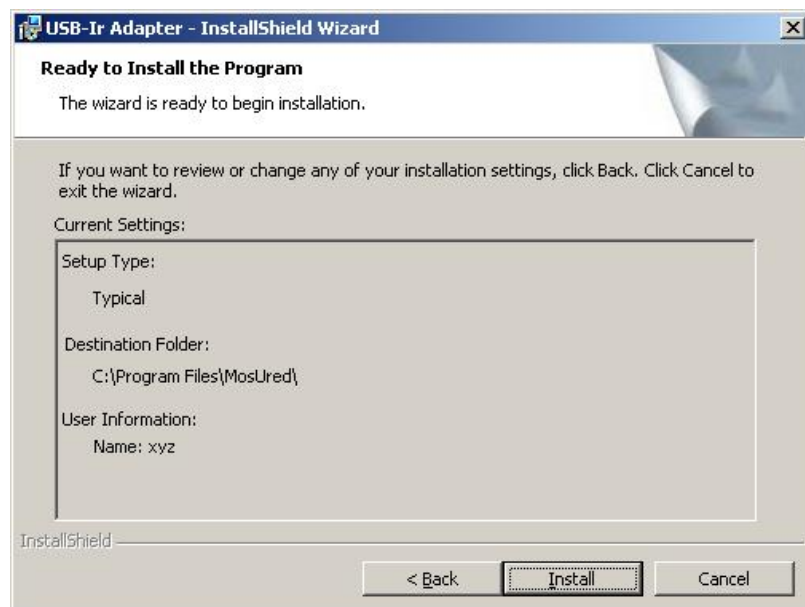
2. It will then pop up a Welcome window. Click "**N**ext>" to continue.



3. The Installer will install ACT-IR4002US in the Destination Folder. To install to a different folder, click "**C**hange...". Otherwise click "**N**ext>" to continue.



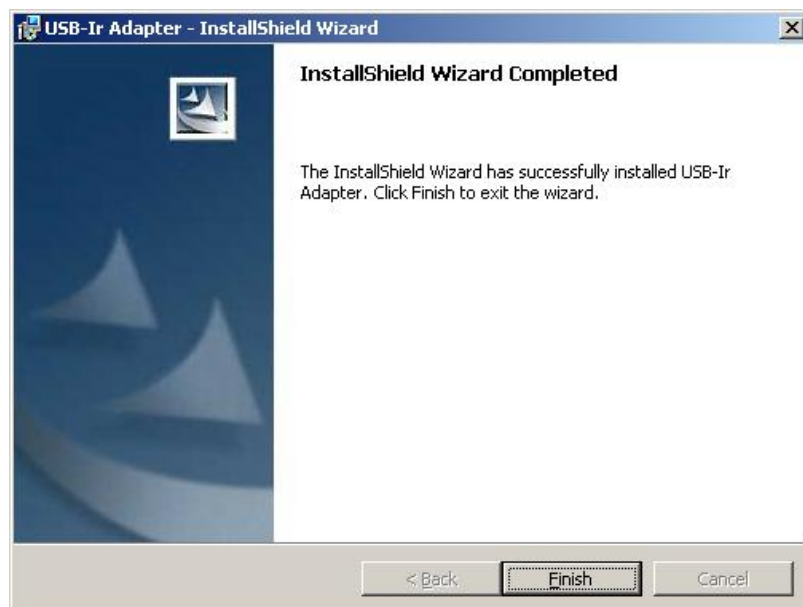
4. It will then display the "Current Settings" as right figure. Click "**I**nstall" to continue.



5. If your OS is Windows XP, this setup.exe file will pop up the right figure to alert. Just click “Continue Anyway” to go on. But you will not see this alert window if you run under Windows 98SE/ME/2000.



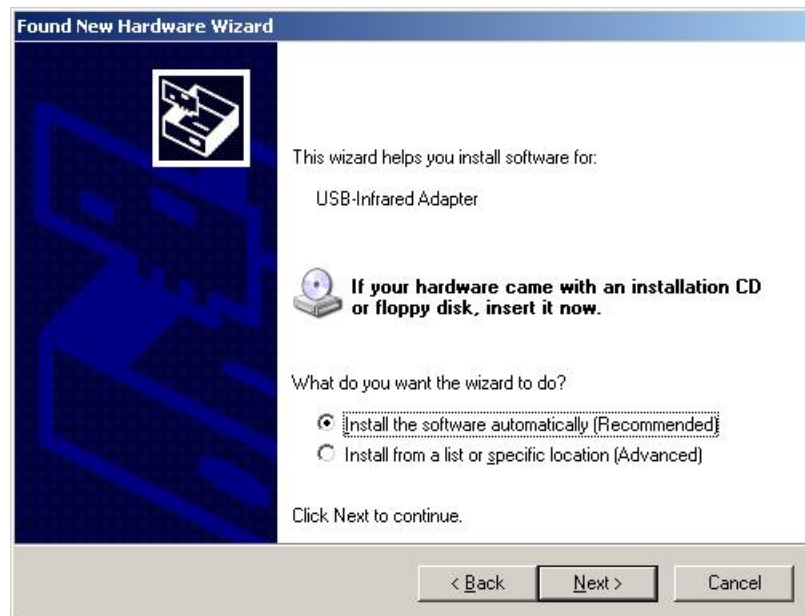
6. The InstallShield Wizard will then show “Completed”. Click “**Finish**” to exit the Wizard.



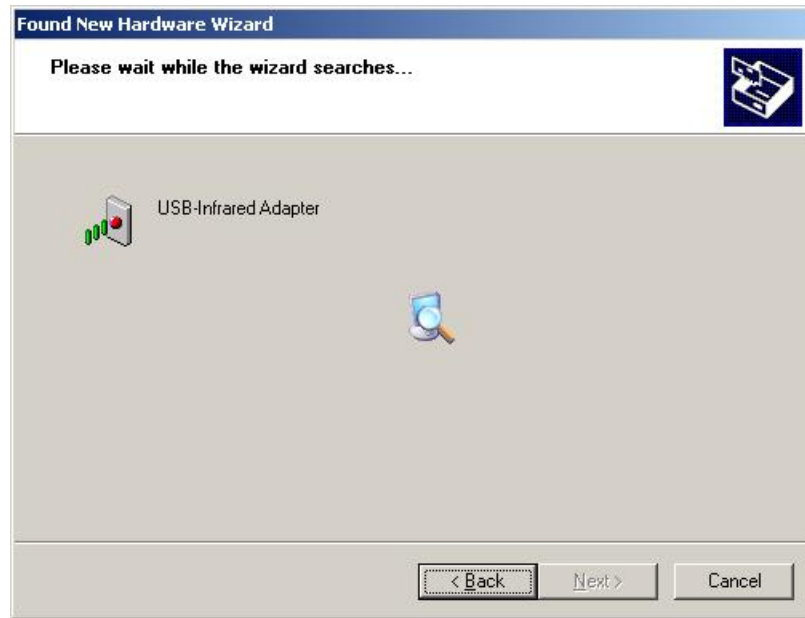
7. Now plug the dongle
ACT-IR4002US. A
“Found New Hardware
Wizard” will pop up as
right figure. Choose “No,
not this time” and click
“Next>” to continue.



8. Choose “Install the
software automatically
[Recommended]” and
click “Next>” to
continue.



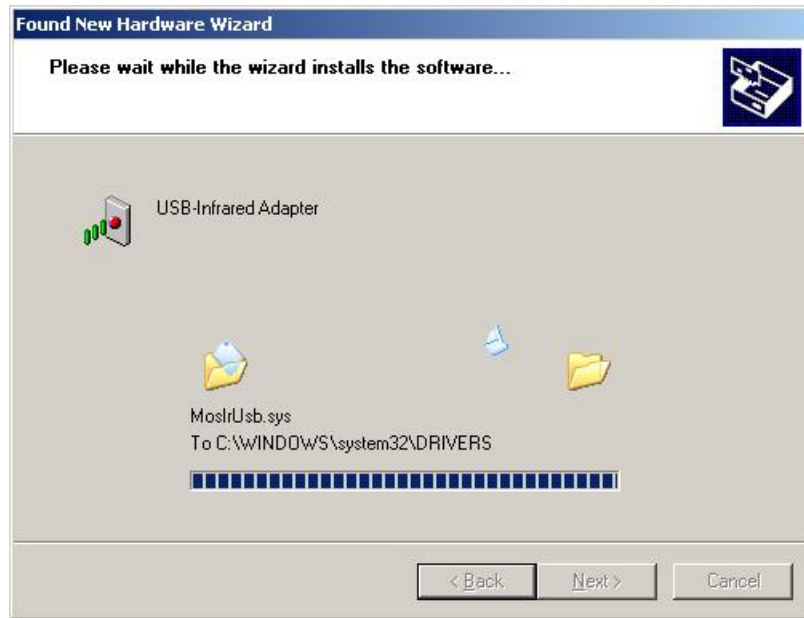
9. It will then search the USB-Infrared Adapter.



10. If your OS is Windows XP, this will pop up the right window to alert. Just click "Continue Anyway" to go on. But you will not see this alert window if you run under Windows 98SE/ME/2000.



11. It will then install the driver as right window.



12. This completes the driver installation. Click "Finish" to close the window.



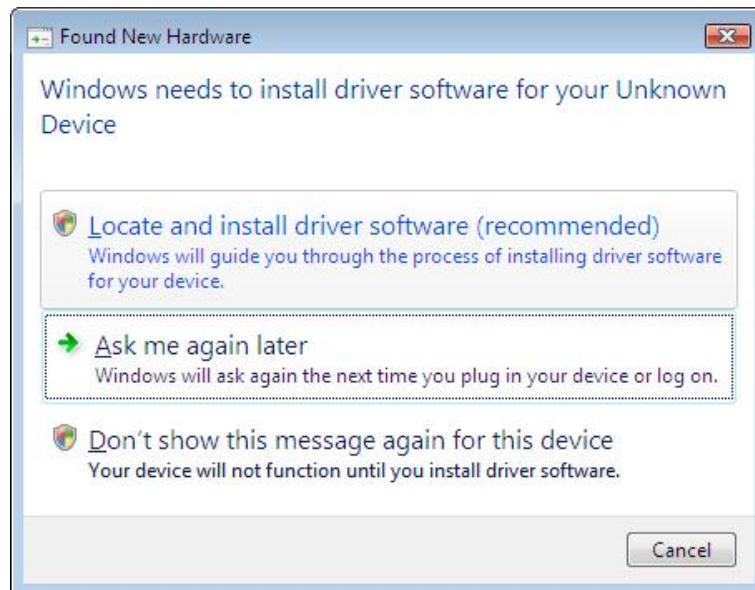
6 DRIVER INSTALLATION FOR WINDOWS 7 / VISTA (32&64BIT)

IMPORTANT: Please **Plug in** ACT-IR4002US to USB port **First** for **Windows 7 or Vista Driver installation!**

(For **Windows 7**, please just **Plug and Play!** Windows will find their Native drivers for you. Yet CD still provides drivers for you in case Windows fails to find the proper native driver).

This is totally different procedure from that for Windows XP and Windows 2000.

1. The OS comes up with a “**Found New Hardware Wizard**” which guides you through the installation procedure. Click option “**Locate and install driver software**” as shown right.



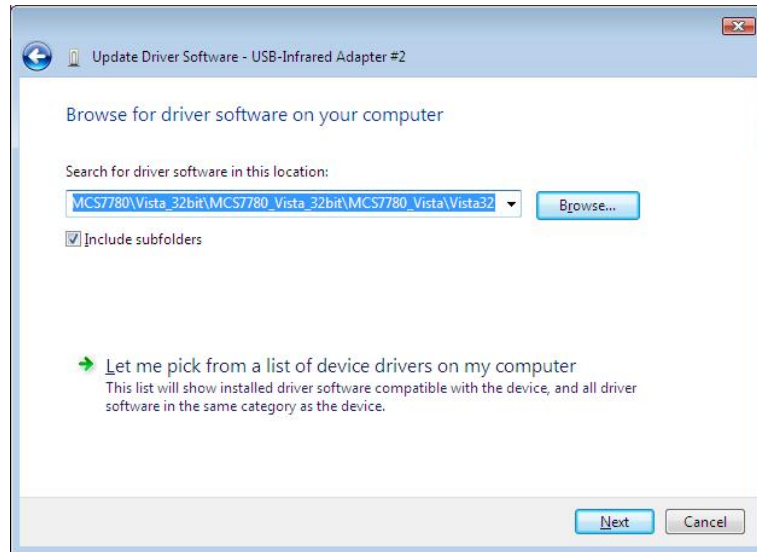
2. Select the option “Browse my computer for driver software” as shown in the right screen shot.



3. Browse for driver software on your computer using the option "Browse" and click "Next" to proceed further.

Note: Select the appropriate driver from CD (e.g. for Windows 7 64bit select the Windows 7 64bit driver)

4. Click on "**Close**" to finish the driver installation.



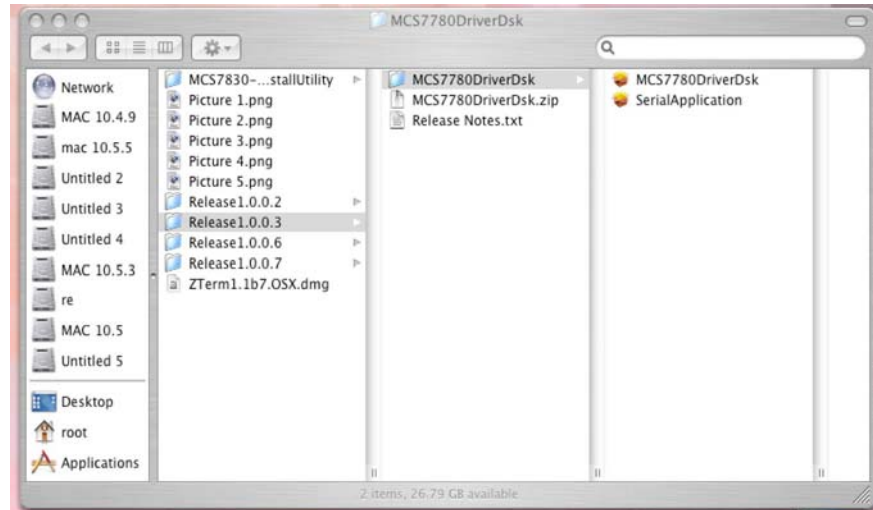
7 DRIVER INSTALLATION FOR MAC OS INTEL BASED PC

IMPORTANT: Please install driver **BEFORE** you plug in ACT-IR4002US to PC USB port.

1. Insert the installation CD,
Double click the package
file

MCS7780DriverDisk.pkg
for installing the driver.

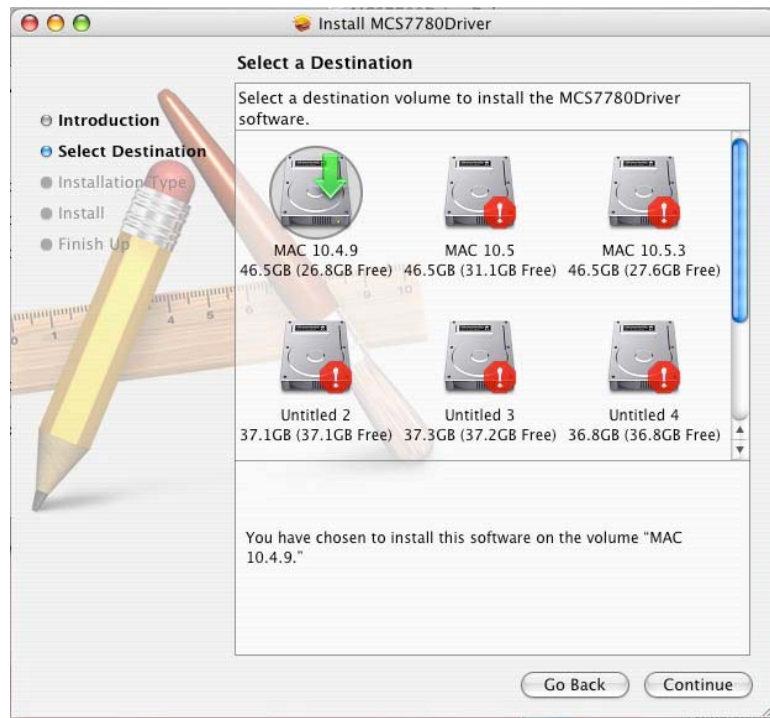
Or go to Applications and
double click the installer
and browse for the
MCS7780DriverDisk.pkg.



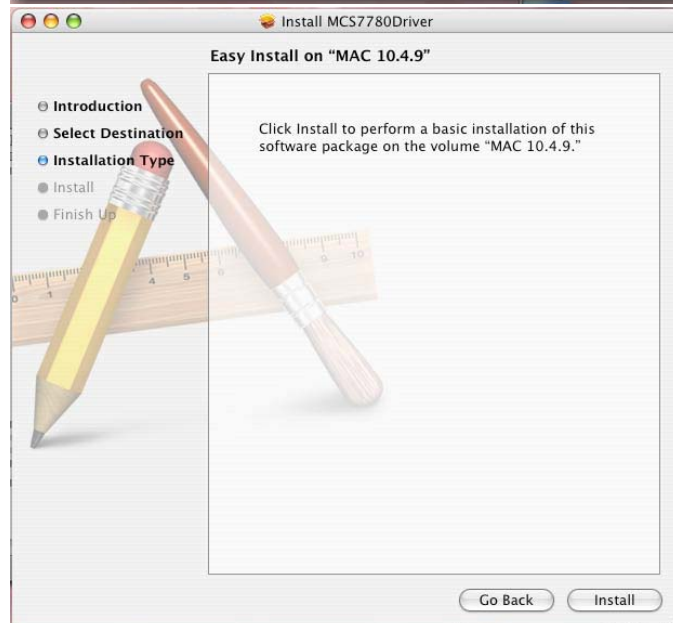
2. An Installer Wizard will
popup. Click **Continue** to
start the installation.



3. Select the Destination volume for the software to install. Click "Continue" to start the installation.



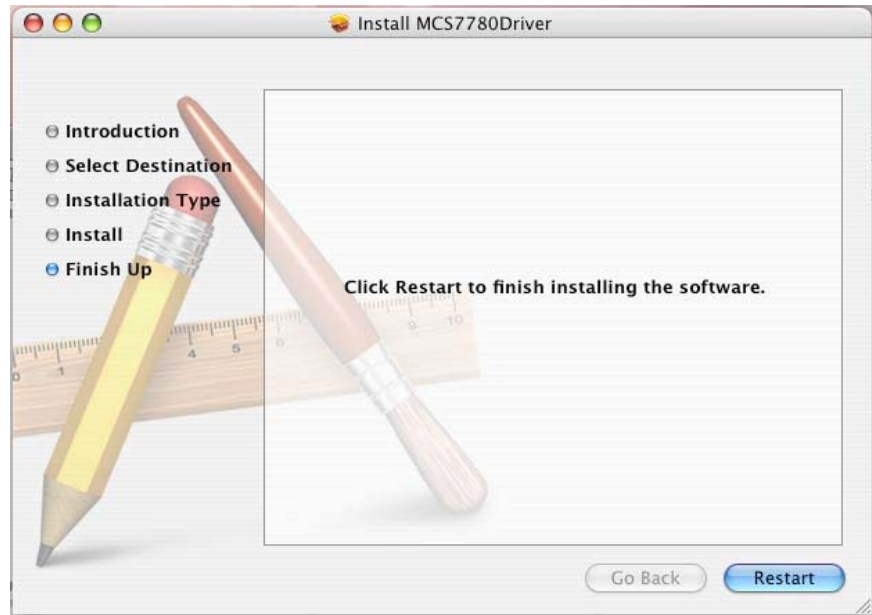
4. Click "install" to proceed further.



5. A message window pops up informing that the system requires you to restart the system after the installation. Press "Continue Installation".



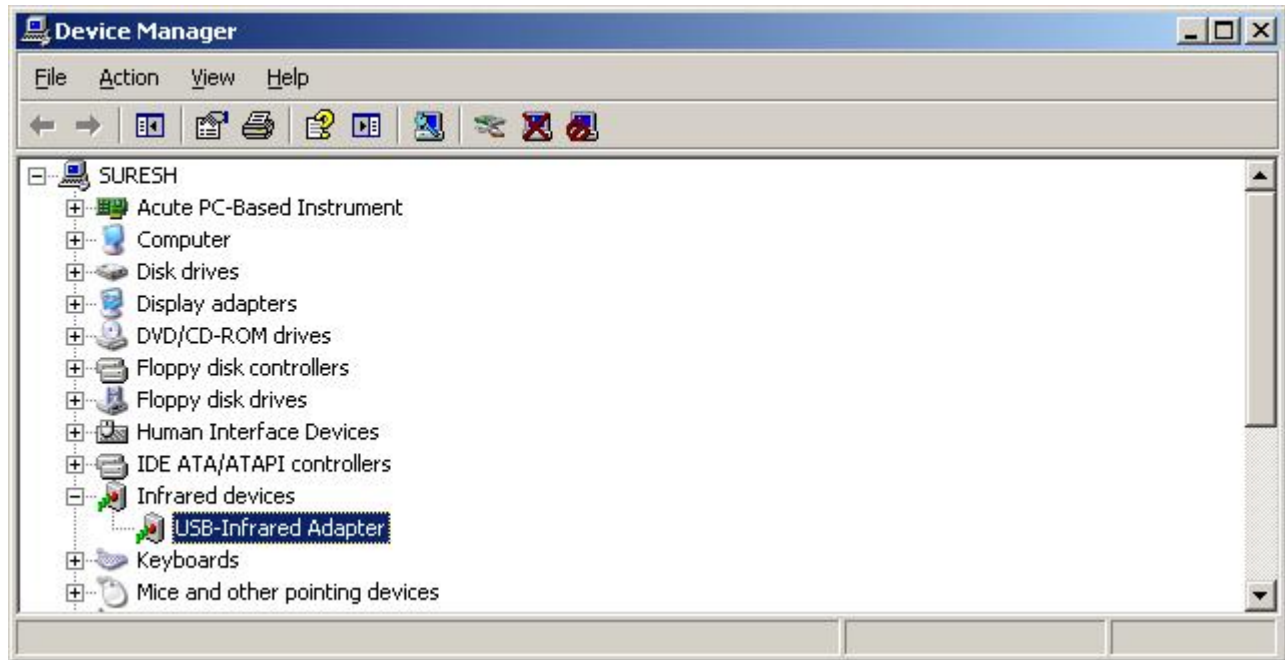
6. Click "Restart" to finish installing the driver.



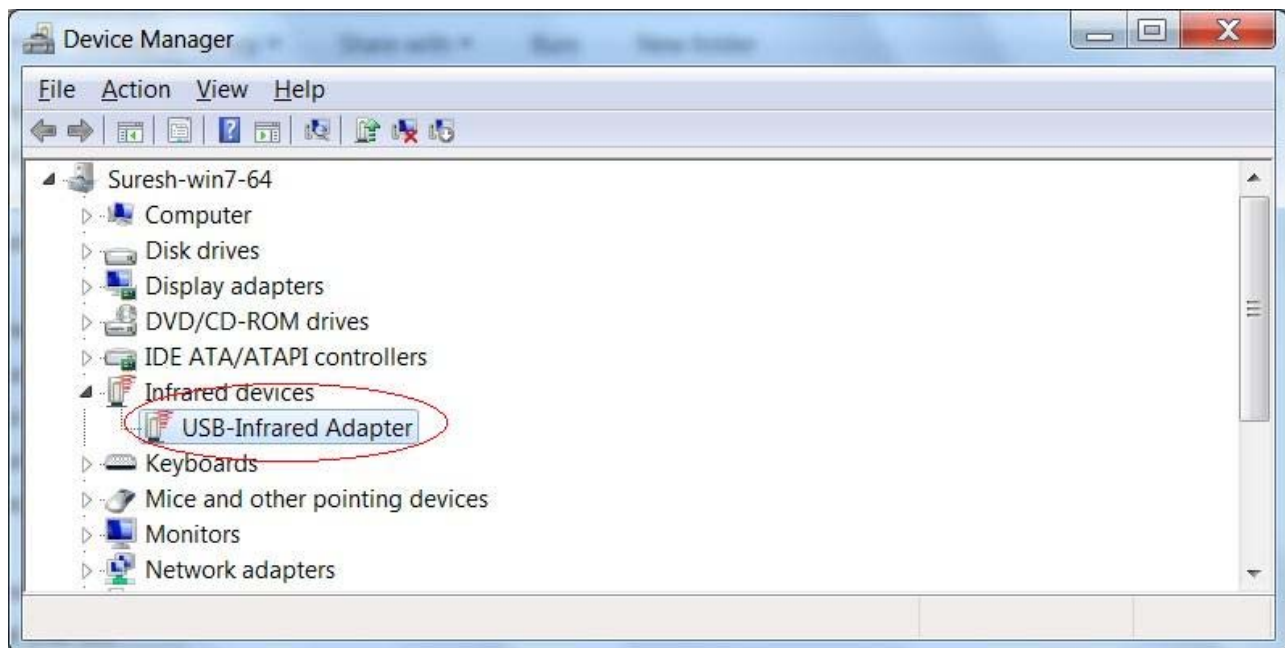
This completes the Installation of the driver.

8 CHECK DRIVER INSTALLATION IN WINDOWS 7/VISTA/XP/2000/ME

From **Device Manager**, you can see “**USB-Infrared Adapter**” under “**Infrared devices**”. This confirms correct detection of ACT-IR4002US.



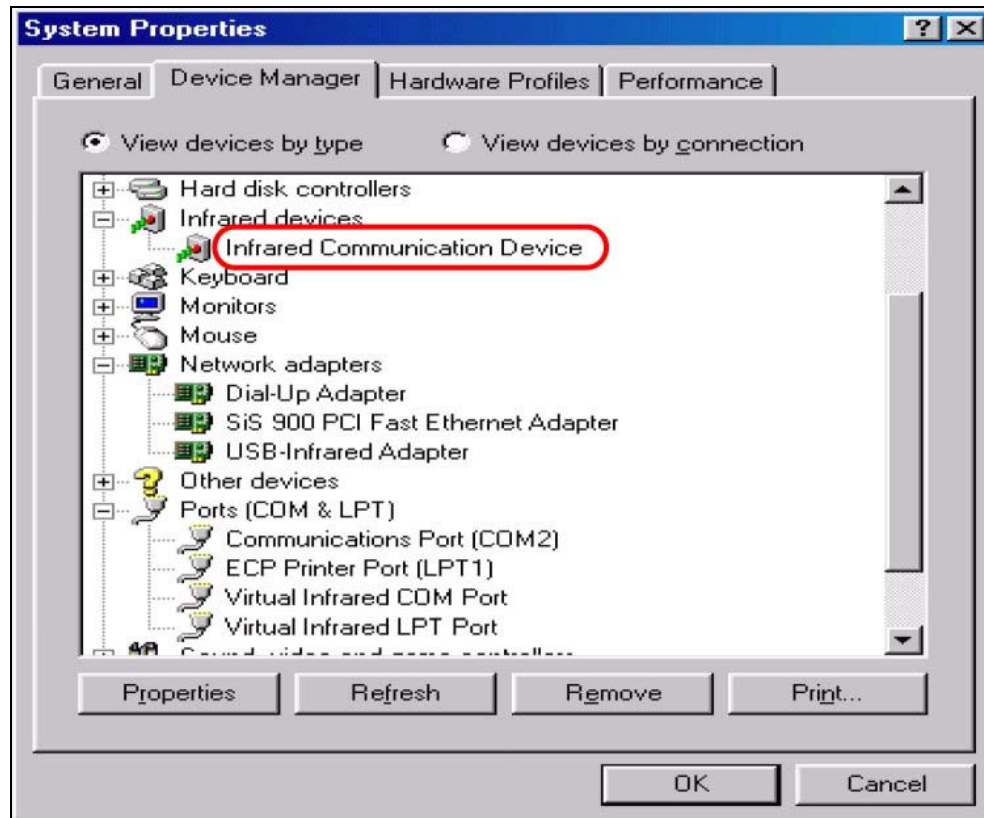
Device Manager under Windows 2000



Device Manager under Windows 7/Vista/XP

9 CHECK DRIVER INSTALLATION IN WINDOWS 98SE

From **Device Manager**, you can see “**Infrared Communication Device**” under “**Infrared devices**”. This confirms correct detection of ACT-IR4002US.



Device Manager under Windows 98SE

10 CHECK DRIVER INSTALLATION IN MAC OS

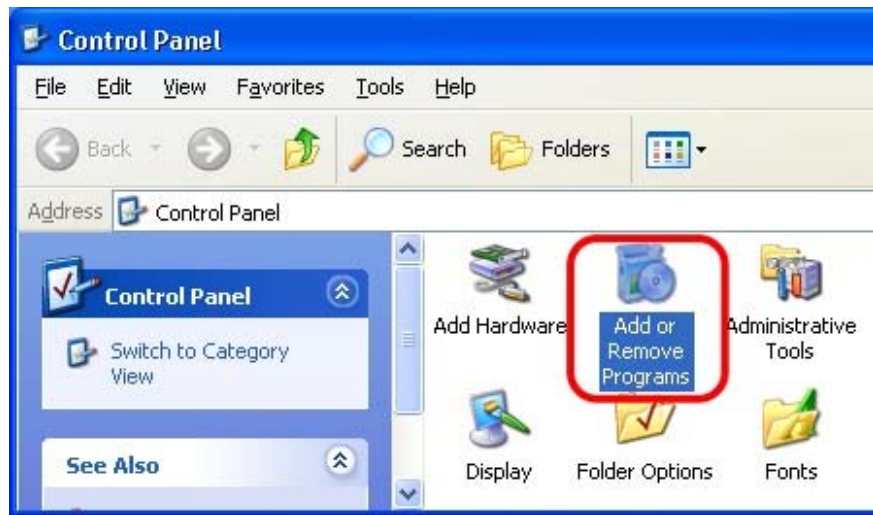
The driver installation can be confirmed by typing "**kextstat**" in the terminal window.

On successful installation, "**com.mosChip.driver.moschipIrDA**" can be seen in the loaded driver.

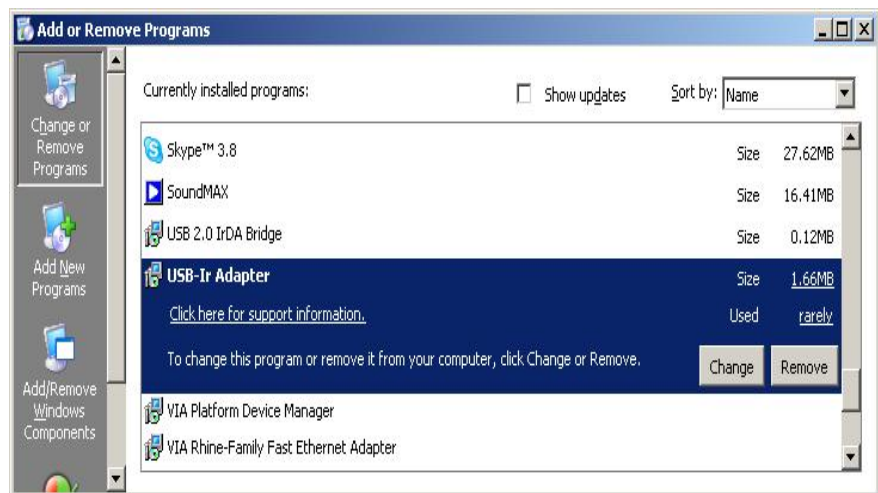
11 DRIVER UN-INSTALLATION FOR WINDOWS XP/2000/ME/98SE

Important: Please keep ACT-IR4002US plugging into the computer until prompted to remove it.

1. Open the **Control Panel** and select **Add or Remove Programs**.



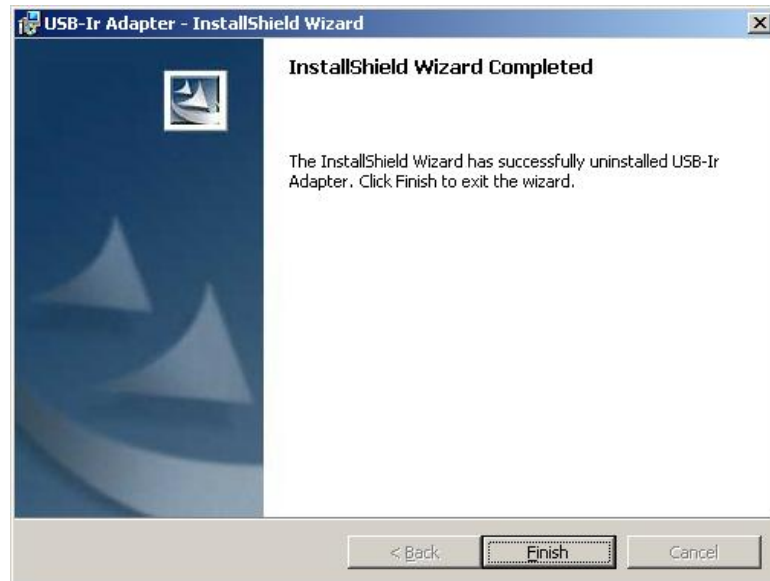
2. Select **"USB Ir Adapter"** from the list. Click **Remove** button to begin the uninstallation process.



3. To continue, click the **Yes** button to uninstall ACT-IR4002US Adapter.

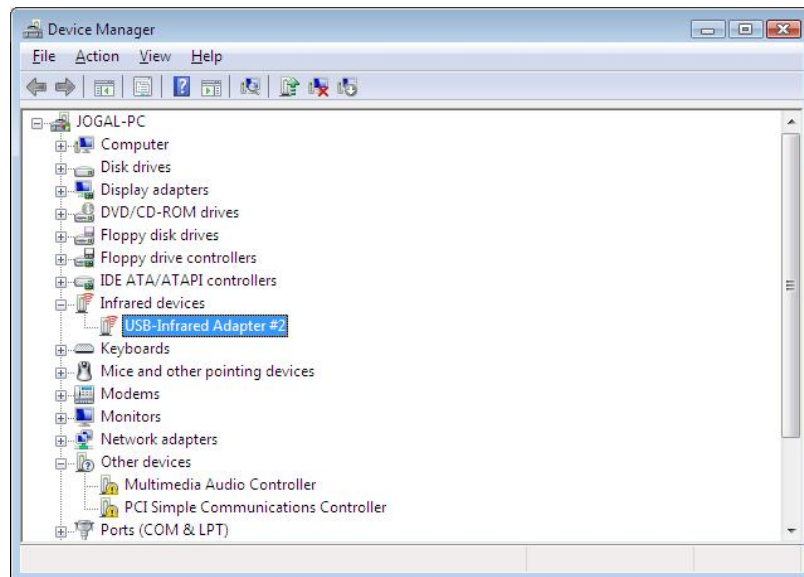


4. To complete the removal process, click the **Finish** button. Unplug ACT-IR4002US from your USB port.

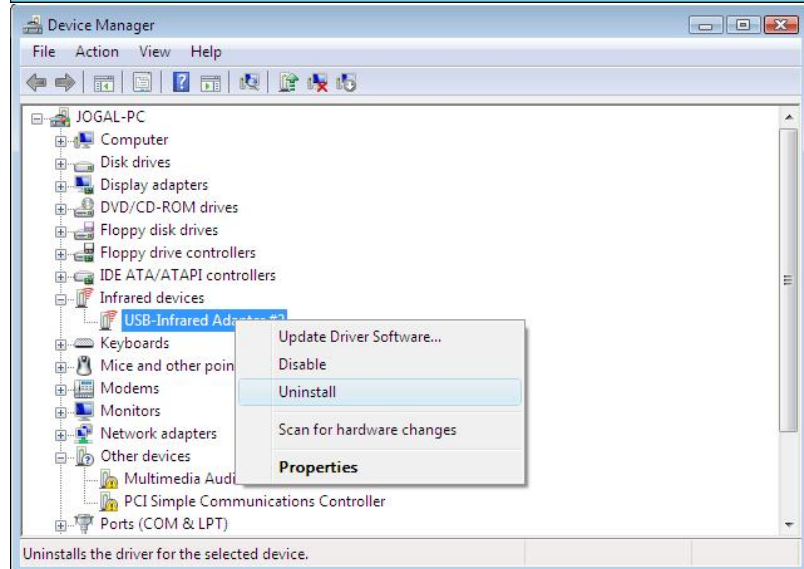


12 DRIVER UN-INSTALLATION FOR WINDOWS 7 / VISTA (32&64BIT)

1. From Device Manager, select **"USB-Infrared Adapter"** under **"Infrared devices"**.



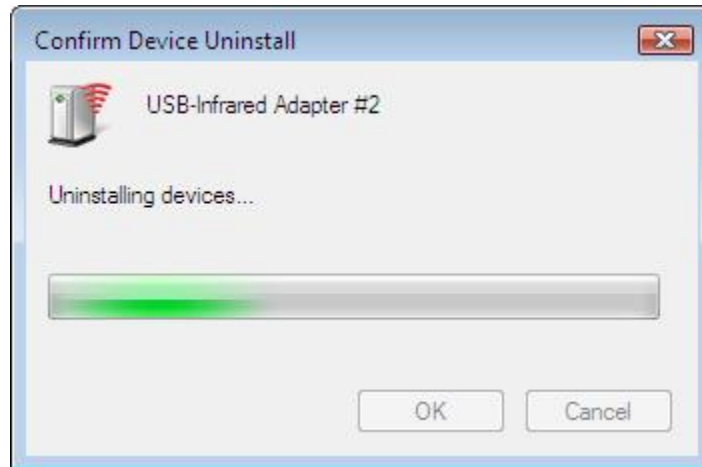
2. Right click the mouse to show the quick Menu. Select **"Uninstall"**.



3. Click **"OK"** to **"Confirm Device Uninstall"**.

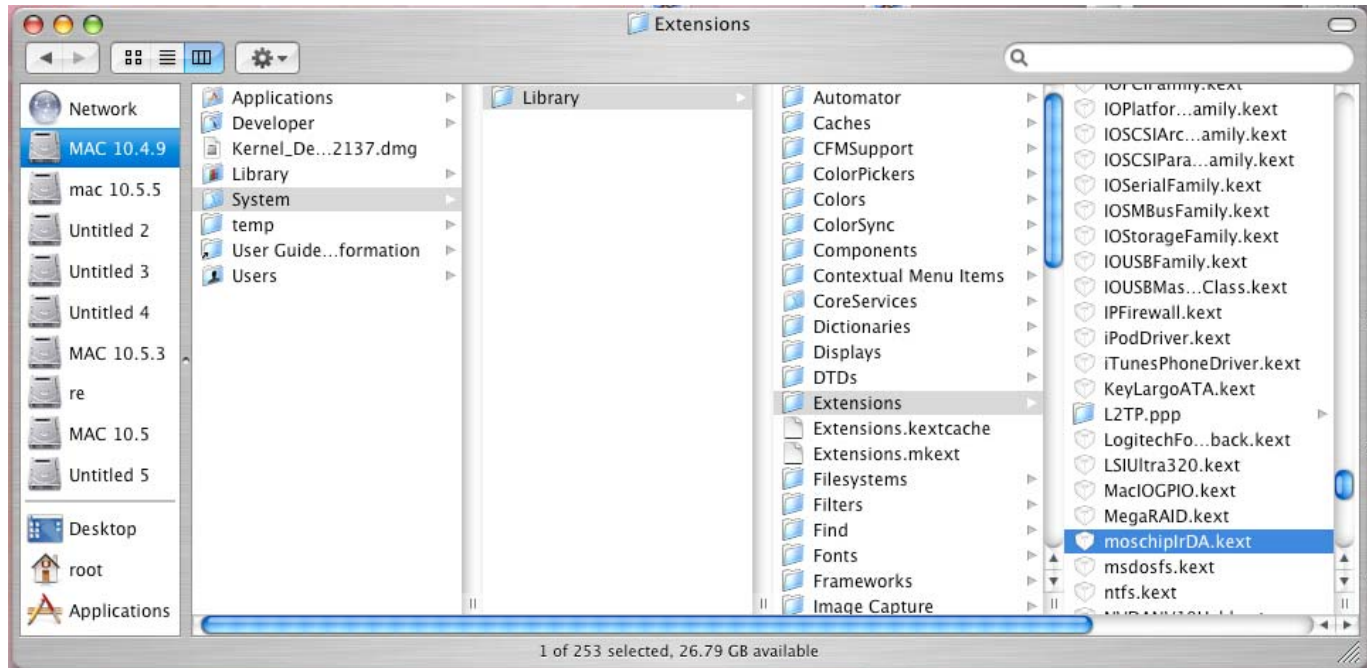


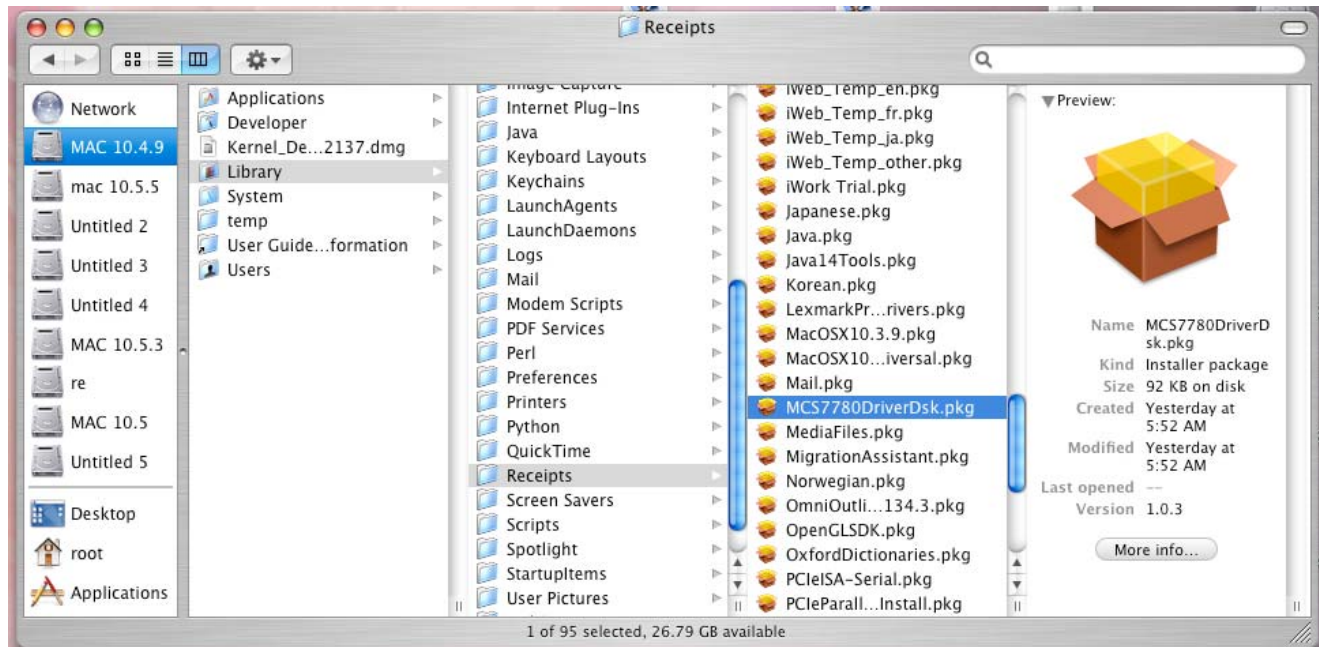
4. You will see the un-installation under process. This will complete the un-installation afterward.



13 DRIVER UN-INSTALLATION IN MAC OS

1. To un-install the driver, “**moschiplrDA.kext**”, “**MCS7780DriverDsk**” files must be deleted from the following location.
2. Finder Current Partition System Library ---> Extensions moschiplrDA.kext (Delete the file / Move to Trash) Finder Current Partition Library ---> Receipts MCS7780DriverDsk.pkg (Delete the file / Move to Trash)





3. Reboot the system to complete the un-installation procedure.

14 TROUBLE SHOOTING

For help on general and miscellaneous problems you may be experiencing with your printing, refer to the following pages for possible solutions. Look up your problem and try the solution.

Symptom	Problem	Solution
Can not establish link (General)	<ol style="list-style-type: none">1. The two IR devices are not aligned properly.2. Distance is too near or far.3. Device is inactivated4. BIOS setting incorrect5. Installation is not correct.	<ol style="list-style-type: none">1. Properly align them again2. Move one device to a proper distance.3. Enable the device by IR monitor.4. Correct the BIOS Setting.5. Refer to un-installation guide to remove the device, then install again.
File Transfer between IR-equipped PDA and ACT-IR device-attached host computer stops before finishing up and an error message appears.	The infrared communication is interfered. For example, something blocks out the infrared beam or the burst of string light source, etc.	Check to find out the source of interference and eliminate it before trying again.
The device work well before. But after I unplug it then plug, it does not work again.	Improper unplug and plug procedure	Before you unplug it, you should disable the device. And enable the device after you plug it into your computer

15 SPECIFICATION

- **Product Name:** ACT-IR4002US FIR-USB Adapter
- **Compatibility:** Fully compliant to USB specification 1.1 and IrDA specification 1.4
- **Communication speed and Distance:**

SIR (9.6, 19.2, 38.4, 57.6, 115.2 kbps): 1-158 cm;

MIR 1.152 Mbps : 1-158 cm

FIR (4 Mbps): 1-100 cm;

- **Connection:** Standard USB connector with 4-ft USB cable --- Attention needed.
- **Power Source:**

Obtain power from USB port. No external power supply required.

- **Electrical Specification:**

Parameter	MIN.	TYPICAL	MAX.	Units
USB supply voltage	4.75	5.0	5.25	V
Stand By (Plug-In Non Active)	20	20	20	mA
Active (Receiving)	21	23	24	mA
Active (Transmitting)	75	82	86	mA

- **Dimension:**
47mm(L) X 17.78mm(W) X 8.89mm(H), 1.85"(L) X 0.7"(W) X 0.35"(H)
- **Weight:**
2.08 oz (60 g)
- **Operating Temperature:** 0° C TO 60° C
- **Storage Temperature:** -20° C TO 85° C

16 PRECAUTIONS

To ensure trouble-free operation, please observe the following precautions:

Optical communications are easily affected by external light sources, weak batteries, transfer distance, transfer angle, etc. Any of these conditions may cause a data transfer failure, incomplete, missing or incorrect data. Make sure that the wireless interface is away from direct sunlight and other strong light source.

- Do not terminate arbitrarily during file transfer process between DUT and computers until finished. Otherwise DUT internal data integrity may be damaged, which is due to the violation of DUT's.
- Do not expose the unit to moisture, as this will damage the internal circuitry.
- Do not expose the unit to extreme temperatures. It should not be placed in direct sunlight or in a closed vehicle, neither should it be placed near heaters nor other heat sources.
- Do not store the unit in a humid or dusty place.
- Use a soft, dry cloth to clean the unit. Do not use a wet cloth or any solvent.
- Do not drop the unit or handle the unit carelessly.

CAUTION:

- Never touch the pins of computer connection terminal. An Electro Static Discharge can damage the internal circuits. If this device requires any servicing, use only an ACTiSYS service dealer, an ACTiSYS approved service facility, or an ACTiSYS repair service.
- When exchanging data with host computer, be sure the appropriate serial communication port is available and is not in conflict with other peripheral device or software.

17 WARRANTY INFORMATION

ACTiSYS Corporation warrants the first end-user purchaser, for a period of 1 year from the date of purchase, that this wireless interface (The Product) will be free from defective workmanship and materials, and agrees that it will, at its option, either repair the defect or replace the defective Product or part thereof at no charge to the purchaser for parts or for labor.

This warranty does not apply to any appearance items of the Product, any consumable items such as paper, ink ribbon, or batteries supplied with the Product, or to any equipment or any hardware, software, firmware, or peripheral other than the Product. This warranty does not apply to any Product the exterior of which has been damaged or defected, which has been subjected to misuse, abnormal service or handling, or which has been altered or modified in design, construction or interfacing. Tampering with Label Voids Warranty.

In order to enforce the rights under this limited warranty, the purchaser should mail, ship or carry the Product, together with proof of purchase, to ACTiSYS.

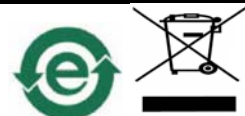
The limited warranty described above is in addition to whatever implied warranties may be granted to purchasers by law. To the extent permitted by applicable law, ALL IMPLIED WARRANTIES INCLUDE THE WARRANTIES OF MERCHANT ABILITY AND FITNESS FOR USER ARE LIMITED TO A PERIOD OF 1 YEAR FROM THE DATE OF PURCHASE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Neither the sales personnel of the seller nor any other person is authorized to make any warranties other than those described above, nor to extend the duration of any warranties beyond the time period described above on behalf of ACTiSYS Corporation.

The warranties described above shall be the sole and exclusive remedy available to the purchaser. Correction of defects, in the manner and for the period of time described above, shall constitute full satisfaction of all claims, whether based on contract, negligence, strict liability or otherwise. In no event shall ACTiSYS Corporation be liable or in any way responsible, for any damages or defects in the Product which were caused by repair or attempted repairs performed by anyone other than ACTiSYS technician. Nor shall ACTiSYS Corporation be liable or in any way responsible for any incidental or consequential economic or property damage. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

FOR YOU RECORDS

For your assistance in reporting this product in case of loss or theft, please record below the model number and serial, which are located on the bottom of the case. Please retain this information.

Model Number:**Serial Number:****Date of Purchase:**

18 CONTACT INFORMATION

GO WIRELESS WITH ACTiSYS IR

ACTiSYS
The Wireless Infra-red Expert

- ◆ IrDA Protocol Software For Portable Devices
- ◆ IrDA Test Software For Hardware Systems
- ◆ IrDA Printer And Computer Adapters

115.2K, 4M and 16M bps

IR100M/1000M

IR2000L

IR220L/L+

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